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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/552,471	10/07/2005	Shinji Kishimoto	529.45475X00	2178

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EXAMINER	
GUPTA, VANI	
ART UNIT	PAPER NUMBER
3768	
MAIL DATE	DELIVERY MODE
09/16/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/552,471	KISHIMOTO, SHINJI	
	Examiner	Art Unit	
	VANI GUPTA	3768	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-15* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-15* is/are rejected.

7)☒ Claim(s) *3-5,7,10,11, abd 13-15* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *07 October 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. ***Claims 3 – 5, 7, 10, 11, and 13 – 15*** *are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim.*

Applicant should note that these claims fail to further limit Claim 1 in terms of the invention's structure. Rather, these dependent claims are directed towards "intended use," and read as steps of a method or process.

Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. ***Claims 1*** *is rejected under 35 U.S.C. 102(b) as being anticipated by Burke et al. (5,517,994).*

Regarding Claims 1, Burke discloses an ultrasonic diagnostic system (fig. 1) that is capable of performing self diagnostic tests on the system processing and control channels coupled to the transducer elements (#30) of an ultrasonic probe (#10; col. 7, line 12), and the ultrasonic probe, itself.

As described above, Burke's system comprises a probe that transmits and receives ultrasonic waves to and/or from a test subject (#12 and #38). The system also comprises a

diagnostic processor (#20), which is coupled to a number of subsystems, including the ultrasound probe. There also is a beamformer (#14) and an image-and-Doppler processor (#16) (col. 2, lines 45 – 50). The image-and-Doppler processor processes digital echo signals to form an image or to make a diagnostic measurement such as the velocity of blood flow in the subject's body. The resultant image or measurement is displayed on a display (#18) (col. 2, lines 15 – 44; and col. 3, lines 1 – 16).

Burke teaches also teaches a judging section: the diagnostic processor operates under the control of, or in conjunction with, a central system controller (not shown). This allows the diagnostic processor to monitor the probe-air interface by performing "self diagnostic tests," and adjust operating characteristic of the system electronics accordingly (for example, monitoring and adjusting probe temperature) (Abstract; col. 2, line 15 - col. 8, line 12).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. **Claim** 2 is rejected under 35 USC 103(a) as being obvious over Burke in view of Suzuki et al. (US 6,602,196 B2).

Regarding Claim 2, Burke discloses an ultrasonic diagnostic apparatus comprising a diagnostic processor that plays the role of the "judging section," as explained above.

Burke differs form Claim 2 in that he does not appear to specifically disclose more than one image-mode processor.

However, Suzuki teaches an ultrasonic imaging apparatus, comprising a B-mode processor and a Doppler processor (fig. 2, #10 and #12; col. 6, lines 28 – 32). A controller (fig. 2, #18) controls the operation of the B-mode processor and Doppler processor (col. 6, line 65 – col. 7, line 5).

Suzuki also explains that ultrasound imaging is based on an established relationship between the sound-ray density, the scan range and the frame rate (col. 1, lines 18 – 37).

Accordingly, Suzuki complements the disclosing of Burke by teaching a controller that is capable of monitoring, when coupled to an image-mode processor, capable of monitoring the intensity of the echoes signals.

Therefore, it would have been prima facie obvious to modify Burke with the teachings of Suzuki to include the controller and image-mode processors to obtain the invention in the instant ***Claim 2****.*

5. ***Claims 3 – 5 and 7 – 15*** *are rejected under 35 USC 103(a) as being obvious over Burke (US 5, 517, 994).*

In light of the claim objections made above, Examiner makes the following rejections

Applicant should note that that Burke and Suzuki's inventions, in combination, are capable of performing the actions of the control section as claimed.

Please see above objections and rejection(s) for details.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a. Johansen (US 7,225,965 B2) for controller that monitors ultrasonic probe activity and to control interval between termination of provision of power to probe;

b. Hwang et al. (US 4,603,702) for monitoring contact of ultrasound transducer with patient; and

c. Masaru (JP 5253225, A) for ultrasonic diagnostic equipment that can turn off power supply of device based on image state.

d. Kazuteru (JP 2154745 A) for delaying deterioration of a probe; and

e. Yoichi (JP 5000138 A) for judging whether an ultrasonic probe is left in the air.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to VANI GUPTA whose telephone number is 571-270-5042. The examiner can normally be reached on Monday - Thursday; 7:30 - 6:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Casler can be reached on 571-272-4956. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Brian L Casler/
Supervisory Patent Examiner, Art Unit 3737

VG
/Vani Gupta/
Examiner, Art Unit 3768